STRUCTURAL NOTES

CONTRACTOR NOTE:

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. O'DONNELL, NACCARATO, MIGNOGNA & JACKSON, INC. IS NOT RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION OR FOR RELATED SAFETY PRECAUTIONS AND PROGRAMS.

CODES AND STANDARDS

1. WIND LOADS AS PER:
   - A. SECTION 1609 OF THE FLORIDA BUILDING CODE 5TH EDITION (2014) WITH AN ULTIMATE WIND SPEED VULT = 170 MPH (NOMINAL WIND SPEED VASD = 132 MPH), FOR RISK CATEGORY II, EXPOSURE C AND INTERNAL PRESSURE COEFFICIENT +/- 0.18.
   - B. THIS BUILDING IS DESIGNED AS AN ENCLOSED BUILDING.
2. THE PROJECT WAS DESIGNED IN ACCORDANCE WITH THE:
   - A. FLORIDA BUILDING CODE 5TH EDITION (2014).
   - B. BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318/ LATEST EDITION).
   - C. MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI 315/ LATEST EDITION).
   - D. SPECIFICATION FOR THE DESIGN, FABRICATION & ERECTION OF STRUCTURAL STEEL FOR BUILDINGS. (AMERICAN INSTITUTE OF STEEL CONSTRUCTION) AISC ASD/ 9TH EDITION OR LRFD 3RD EDITION.
   - E. SPECIFICATION FOR STRUCTURAL CONCRETE FOR BUILDINGS, ACI 301/LATEST EDITION.
   - F. NATIONAL DESIGN SPECIFICATION, WOOD CONSTRUCTION NDS/LATEST EDITION.
   - G. BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530, 530.1/ASCE 5, 6/TMS 402, 602/LATEST EDITIONS).
3. ARCHITECTURAL AND MECHANICAL DRAWINGS:
   - A. THE STRUCTURAL DRAWINGS ARE PART OF THE CONTRACT DOCUMENTS AND DO NOT BY THEMSELVES PROVIDE ALL THE INFORMATION REQUIRED TO PROPERLY COMPLETE THE PROJECT STRUCTURE. THE GENERAL CONTRACTOR SHALL CONSULT THE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND COORDINATE THE INFORMATION CONTAINED IN THESE DRAWINGS WITH THE STRUCTURAL DRAWINGS TO PROPERLY CONSTRUCT THE PROJECT.
   - B. REFER TO ARCHITECTURAL, MECHANICAL OR ELECTRICAL DRAWINGS FOR ADDITIONAL OPENINGS, DEPRESSIONS, FINISHES, INSERTS, BOLTS SETTINGS, DRAINS, REGLETS, ETC.
   - C. BEFORE ORDERING ANY MATERIALS OR DOING ANY WORK, THE CONTRACTOR SHALL VERIFY ALL MEASUREMENTS TO PROPERLY SIZE OR FIT THE WORK. NO EXTRA CHARGE OR COMPENSATION WILL BE ALLOWED BY THE OWNER RESULTING FROM THE CONTRACTOR'S FAILURE TO COMPLY WITH THIS REQUIREMENT.
   - D. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH ANY WORK.
   - E. ALL STRUCTURES HAVE BEEN DESIGNED TO RESIST THE DESIGN LOADS LISTED ONLY AS COMPLETED STRUCTURES. THE GENERAL CONTRACTOR SHALL FULLY BRACE AND OTHERWISE PROTECT WORK IN PROGRESS UNTIL THE STRUCTURES ARE COMPLETED. THE GENERAL CONTRACTOR SHALL ALSO ENSURE THAT ITS OPERATIONS AND PROCEDURES PROVIDE NO LOADING GREATER THAN THE DESIGN LOADS LISTED ON ANY MEMBER.
4. SECTIONS AND DETAILS:

   ALL DETAILS, SECTIONS AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE UNLESS OTHERWISE SHOWN.
5. THRESHOLD INSPECTIONS SHALL BE PERFORMED DURING CONSTRUCTION OF THIS BUILDING AS REQUIRED BY SECTION 110.8 OF FBC.
6. MATERIALS AND ASSEMBLY TEST AS FOLLOWS:
   - A. EXTERIOR WINDOWS, SLIDING AND PATIO GLASS DOORS SHALL BE TESTED BY AN APPROVED INDEPENDENT TESTING LABORATORY, AND SHALL BE LABELED WITH AN APPROVED LABEL IDENTIFYING THE MANUFACTURER, PERFORMANCE CHARACTERISTICS AND APPROVED PRODUCT CERTIFICATION AGENCY, TESTING LABORATORY, EVALUATION ENTITY OR FLORIDA STATE WIDE PRODUCT APPROVAL NUMBER TO INDICATE COMPLIANCE WITH THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:

     ANSI/AAMA/NWWDA 101/I.S. 2-97 OR TAS 202 (HVHZ SHALL COMPLY WITH TAS 202)
   - B. EXTERIOR DOOR ASSEMBLIES SHALL BE TESTED FOR STRUCTURAL INTEGRITY IN ACCORDANCE WITH ASTM E330 AT A LOAD OF 1.5 TIMES THE REQUIRED DESIGN PRESSURE LOAD. THE LOAD SHALL BE SUSTAINED FOR 10 SECONDS WITH NO PERMANENT DEFORMATION OF ANY MAIN FRAME OR PANEL MEMBER IN EXCESS OF 0.4 PERCENT OF ITS SPAN AFTER THE LOAD IS REMOVED. HVHZ SHALL COMPLY WITH TAS 202. AFTER EACH SPECIFIED LOADING, THERE SHALL BE NO GLASS BREAKAGE, PERMANENT DAMAGE TO FASTENERS, HARDWARE PARTS, OR ANY OTHER DAMAGE, WHICH CAUSES THE DOOR TO BE INOPERABLE.
   - D. CUSTOM (ONE OF A KIND) EXTERIOR DOOR ASSEMBLIES SHALL BE TESTED BY AN APPROVED TESTING LABORATORY OR BE ENGINEERED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICES.
   - E. WINDOW AND DOOR ASSEMBLIES SHALL BE ANCHORED IN ACCORDANCE WITH THE PUBLISHED MANUFACTURER'S RECOMMENDATIONS TO ACHIEVE THE DESIGN PRESSURE SPECIFIED. SUBSTITUTE ANCHORING SYSTEM USED FOR SUBSTRATES NOT SPECIFIED BY THE FENESTRATION MANUFACTURER SHALL PROVIDE EQUAL OR GREATER ANCHORING PERFORMANCE AS DEMONSTRATED BY ACCEPTED ENGINEERING PRACTICE.
7. ALL FASTENERS DESIGNATED, AS STAINLESS STEEL SHALL CONFORM TO AISI 316 STAINLESS STEEL.

SPECIALTY ENGINEERED PRODUCTS

1. THE GENERAL CONTRACTOR IS RESPONSIBLE TO COORDINATE THE PROPER SUBMISSION OF SPECIALTY ENGINEERED SHOP DRAWINGS WHICH SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO ASSURE THAT THE SPECIALTY ENGINEERED SHOP DRAWINGS ARE SUBMITTED IN A TIMELY MANNER SO AS TO ALLOW REVIEWS AND RESUBMISSIONS AS REQUIRED. ALL SPECIALTY ENGINEERED PRODUCTS SHALL BE DESIGNED FOR THE APPROPRIATE GRAVITY LOADS AND WIND LOADS INCLUDING UPLIFT AND LATERAL LOADS. INTERIOR SPECIALTY PRODUCTS SHALL BE DESIGNED FOR LATERAL LOADS TO ASSURE STABILITY. SPECIALTY ENGINEERED PRODUCTS SHALL BE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
   - A. LIGHT GAUGE METAL, INCLUDING BUT NOT LIMITED TO, SOFFITS, CLADDING, CEILINGS, ETC.
   - B. MISCELLANEOUS HANGERS, CHANDELIERS, CABINETS, METAL FRAMES, LADDERS, RIGGING, HANGING WALLS, RAILINGS, GLAZING FRAMES, CLADDING SUCH AS STONE, PRECAST, ALUMINUM, METAL PANELS, CABLE BARRIER SYSTEMS, ETC. OR ANY OTHER MISCELLANEOUS PRODUCT REQUIRED BY ANY OF THE CONSTRUCTION DOCUMENTS.
   - C. IN ADDITION TO THE LOADS SHOWN IN THE DESIGN LOAD SCHEDULE, THE SPECIALTY ENGINEER SHALL DESIGN FOR THE WEIGHT OF ALL MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT AND FIXTURES, AS WELL AS CHANDELIER FIXTURES, BAR CABINETS, AND ART WORK / MOBILES.

GENERAL CONTRACTOR TO INCLUDE IN THEIR BID THE COST OF THE ABOVE NOTED SPECIALTY ENGINEERING.

SHORING AND RESHORING

1. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SHORING, BRACING AND STRUCTURAL SUPPORTS AS REQUIRED TO PRESERVE THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION. SUBMIT SIGNED AND SEALED SHOP DRAWINGS PREPARED BY A DELEGATED ENGINEER EXPERIENCED IN SUCH WORK AND LICENSED IN THE STATE OF FLORIDA. SUBMIT DRAWINGS TO THE ARCHITECT, ENGINEER, SPECIAL INSPECTOR, AND BUILDING OFFICIAL FOR RECORD ONLY. SHORING AND RESHORING DESIGN AND CONSTRUCTION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE ENGINEER IN HIS EMPLOY.

   THE DELEGATED ENGINEER WHO PREPARES THE SHORING AND RESHORING DRAWINGS SHALL INSPECT THE SHORING AND RESHORING. HE SHALL PROVIDE A FIELD REPORT OF EACH INSPECTION TO THE CONTRACTOR AND ARCHITECT.
2. THE BRACING DETAILS OF THE EXTERIOR WALLS OF WHICH IN SOME CASES, THE ROOF DECK DIAPHRAGM AND ROOFING MEMBERS WILL BE REMOVED LEAVING THE EXTERIOR WALLS UNBRACED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HIRE A SPECIALTY SHORING AND BRACING ENGINEER TO PROVIDE THE REQUIRED DOCUMENTS FOR THIS EFFORT.

FOUNDATION

1. ALL SITE PREPARATION AND EXCAVATION WORK IS TO BE PERFORMED IN STRICT ACCORDANCE WITH THE:
   - A. REPORT ON SOILS AND FOUNDATION INVESTIGATION PREPARED BY N1, DATED N2.
   - B. RECOMMENDATIONS ON SOILS AND FOUNDATIONS INVESTIGATION PREPARED BY AN APPROVED TESTING LABORATORY PRIOR TO FOUNDATION WORK.
2. BOTTOM OF FOOTINGS TO BEAR ON:
   - A. CONTROLLED COMPACTED FILL CAPABLE OF SAFELY SUPPORTING N1 PSF.
3. SOILS SUPPORTING ALL FOOTINGS MUST BE INSPECTED AND APPROVED BY A REGISTERED SOILS ENGINEER BEFORE COMMENCING WORK, ORDERING MATERIALS, OR MOVING FORWARD IN ANY WAY. APPROVAL IN WRITING MUST INDICATE THE SOIL IS ADEQUATE TO SAFELY SUSTAIN SPECIFIED SOIL BEARING PRESSURE.
4. TOP OF ALL EXTERIOR FOOTINGS SHALL BE MINIMUM 16" BELOW EXTERIOR FINISH GRADE.
5. EXCAVATION & BACKFILL:
   - A. ALL EXCAVATION SHALL BE KEPT DRY. EXCAVATE TO DEPTHS AND DIMENSIONS INDICATED. TAKE EVERY PRECAUTION TO GUARD AGAINST ANY MOVEMENT OR SETTLEMENT OF ADJACENT STRUCTURES, UTILITIES, PIPING, ETC.
   - B. PROVIDE ANY BRACING OR SHORING NECESSARY TO AVOID SETTLEMENT OR DISPLACEMENT OF EXISTING FOUNDATION OR STRUCTURES.
6. CENTERLINE OF FOOTINGS: SHALL COINCIDE WITH CENTERLINE OF COLUMNS UNLESS OTHERWISE NOTED ON DRAWINGS.
7. DIMENSIONS: ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS MUST BE VERIFIED AND COORDINATED WITH THE ARCHITECTURAL DRAWINGS BY THE CONTRACTOR BEFORE PROCEEDING WITH THE CONSTRUCTION. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER IN WRITING BEFORE PROCEEDING WITH ANY WORK.

CONCRETE

1. CONCRETE ELEMENTS TO HAVE THE FOLLOWING STRENGTHS:

A. FOUNDATIONS	3000 PSI
B. SLAB-ON-GRADE	3000 PSI
C. COLUMNS	4000 PSI
D. WALLS	4000 PSI
E. BEAMS	4000 PSI
F. TIE BEAMS	4000 PSI
G. STRUCTURAL SLABS	4000 PSI
H. MASONRY GROUT	3000 PSI

   ALL OTHER CONCRETE TO BE 4000 PSI UNLESS NOTED OTHERWISE.
2. ALL CONCRETE SHALL BE READY MIX AND MEET THE FOLLOWING REQUIREMENTS:
   - A. A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS
   - B. A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI @ 28 DAYS
   - C. SLUMPS SHALL BE 4" MINIMUM AND 6" MAXIMUM.
   - D. CONCRETE SHALL HAVE 3 +/- 1.5 PERCENT AIR ENTRAINMENT.
   - E. ALL CONCRETE TO HAVE MAXIMUM WATER/CEMENT RATIO OF 0.55.
   - F. JOBSITE WATER SHALL NOT BE ADDED.
   - G. CEMENT SHALL CONFORM WITH ASTM C150 TYPE 1. SLAG, ASTM C989 SHALL BE LIMITED TO 50% (BY WEIGHT OF CEMENTITIOUS MATERIAL AND FLY ASH, ASTM C618, CLASS F, SHALL BE LIMITED TO 25% (BY WEIGHT) OF CEMENTITIOUS MATERIAL.
3. ALL CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE ACI BUILDING CODE (ACI 318/ LATEST EDITION), THE ACI DETAILING MANUAL (ACI 315/ 1994 EDITION), AND THE SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301/ LATEST EDITION).
4. SUBMIT REINFORCING STEEL SHOP DRAWINGS PRIOR TO ANY FABRICATION.
5. CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS REQUIRED BY ACI SPECIFICATIONS.
6. WELDED WIRE FABRIC SHALL COMPLY WITH ASTM A 185, UNLESS OTHERWISE SPECIFIED. PLACE FABRIC 2" CLEAR FROM TOP OF THE SLAB IN SLAB ON GRADE AND SUPPORT ON SLAB BOLSTERS SPACED AT 3'-0" O.C.
7. REQUIREMENTS:
   - A. ALL REINFORCING STEEL SHALL BE MANUFACTURED FROM HIGH STRENGTH BILLET STEEL CONFORMING TO ASTM DESIGNATION A 615 GRADE 60.
   - B. WWF SHALL COMPLY WITH ASTM A 185.
8. LAP ALL BARS WITH CLASS B TENSION LAP SPLICE UNLESS OTHERWISE NOTED ON DRAWINGS. LAP ALL WWF A MINIMUM OF 12 INCHES (UNLESS OTHERWISE NOTED).
9. REINFORCING BARS:
   - A. AT CORNERS OF CONCRETE WALLS, BEAMS AND CONTINUOUS WALL FOOTINGS, PROVIDE MATCHING HORIZONTAL BARS X 5'-0" BENT BAR FOR EACH HORIZONTAL BAR SCHEDULED AT EACH FACE.
   - B. WHERE COLUMNS ARE AN INTEGRAL PART OF CONCRETE WALLS, WALL REINFORCEMENT SHALL BE CONTINUOUS THRU THE COLUMNS.
   - C. ALL HOOKS SHOWN IN REINFORCEMENT SHALL BE ACI RECOMMENDED HOOKS UNLESS OTHERWISE NOTED.
   - D. FOR BALCONIES, SLABS AND WALKWAYS EXPOSED TO WEATHER ALL REINFORCING STEEL (TOP AND BOTTOM) AS WELL AS SPACERS AND OTHER DEVICES FOR SPACING, SUPPORTING AND FASTENING REINFORCING SHALL BE GALVANIZED CONFORMING TO ASTM A767. BOLSTERS AND CHAIRS TO BE PLASTIC. CONCRETE PLACED IN THESE AREAS TO HAVE .40 W/C RATIO MAXIMUM AND CONTAIN 2.5 GALLONS OF CALCIUM NITRATE PER CUBIC YARD. REBAR COVER TO BE 1.5" MINIMUM.
   - E. ALL REBARS THAT ARE TO BE DRILLED AND FASTENED WITH ADHESIVE ANCHORS (ONLY IN AN OVERHEAD, INCLINED UPWARD OR HORIZONTAL POSITION) INTO CONCRETE, REQUIRE THE INSTALLER BE ACI CERTIFIED PER ACI 318-11. THE ALTERNATIVE IS TO PERFORM A PULL TEST ON EVERY REBAR.
   - F. CONTRACTOR SHALL INCLUDE IN HIS BASE BID THE COST OF 50 TONS OF ADDITIONAL REINFORCING STEEL, INCLUDING DETAILING, FABRICATION, BENDING, FURNISHING, AND PLACING. THIS EXTRA STOCK SHALL BE FURNISHED AND USED FOR SPECIAL CONDITIONS AS DIRECTED BY THE ARCHITECT, THE ARCHITECT'S AGENT OR BY THE OWNER'S CONSTRUCTION SUPERVISOR. THE PRICE OF THE UNUSED EXTRA STOCK SHALL BE CREDITED TO THE OWNER'S ACCOUNT.
10. CONCRETE LINTELS:
   - A. DROP BOTTOM OF BEAM OR SLAB AT WINDOWS, DOORS AND MASONRY OPENINGS AS REQUIRED TO PROVIDE A CONCRETE CLOSURE BETWEEN THE BOTTOM OF THE BEAM AND WINDOW AND/OR DOOR HEADER OR PROVIDE A PRECAST CONCRETE LINTEL BY CASTCRETE IF NOT NEXT TO A POURED CONCRETE COLUMN.
   - B. MAXIMUM DROP SHALL BE 16" (TWO BLOCK COURSES) AND SPAN EQUAL TO MASONRY OPENING WIDTH. PROVIDE 2 #5 AT BOTTOM OF DROP INCLUDING #3 TIES @ 24" O.C. EXTENDING TO TOP OF BEAM REINFORCING. IF THE LINTEL EXCEEDS THE ABOVE LIMIT OF DROP, A SEPARATED LINTEL SHALL BE PROVIDED AS FOLLOWS:
     - L1. OPENING LESS THAN 6'0" WIDE 8" X 8" W/2 #5 BOTTOM BARS.
     - L2. OPENING BETWEEN 6'0" AND 12'0" WIDE 8" X 12" W/2 #6 BOTTOM BARS.
   - C. LINTELS TO HAVE 8" MINIMUM BEARING AT EACH END.
   - D. IF THE MASONRY OPENING HAS AN END ADJACENT TO A CONCRETE COLUMN PROVIDE (2) #5 OR #6 DOWELS, AS THE CASE MAY BE, IN THE CONCRETE COLUMN WITH SHEAR KEY 1-1/2 INCH DEEP BY LINTEL'S DEPTH AND WIDTH FOR ITS SUBSEQUENT CONSTRUCTION.

MASONRY

1. MASONRY UNITS SHALL BE
   - A. LOAD BEARING ASTM C90
   - B. TYPE II NON-MOISTURE CONTROLLED
   - C. NORMAL WEIGHT
   - D. ALL CMU SHALL BE LAID IN A FULL BED OF MORTAR IN RUNNING BOND (U.N.O.).
2. THE COMPRESSIVE STRENGTH OF MASONRY (F'M) SHALL BE 1,500 PSI AS CALCULATED IN ACCORDANCE WITH ASTM C1314.
3. ALL MORTAR SHALL BE IN ACCORDANCE WITH ASTM SPECIFICATION C270.
   - A. FROM FIELD OBTAINED TEST CUBES. (MIN. OF TWO)
4. GROUT SHALL BE A HIGH SLUMP MIX
   - A. IN ACCORDANCE WITH ASTM SPECIFICATION C476
5. ALL CONCRETE MASONRY BEARING AND SHEAR WALLS SHALL BE
   - A. CONSTRUCTED
   - B. INSPECTED BY A CERTIFIED INSPECTION COMPANY AND CONSTRUCTED

   IN ACCORDANCE WITH THE "BUILDING CODE REQUIREMENT FOR MASONRY STRUCTURES" (ACI 530/ASCE 5/TSM 402) AND "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530.1/ASCE 6/TSM 602)/ LATEST EDITIONS.
6. PROVIDE 8" X 8" MASONRY BEAM WITH 2 #5 CONT. AT EVERY WINDOW SILL. EXTEND BEAM 8" BEYOND EDGE OF OPENING.
7. PROVIDE HOT DIPPED GALVANIZED LADDER TYPE HORIZONTAL JOINT REINFORCEMENT (9 GA.) AT 16" ON CENTER VERTICAL IN ALL MASONRY WALLS. PROVIDE DOVE TAIL SLOT ANCHORS AT CONCRETE COLUMNS.

   FOR JOINT REINFORCEMENT, WALL TIES, ANCHORS AND INSERTS, APPLY A MINIMUM COAT OF 1.5 OUNCES PER SQUARE FOOT (PSF) (458/G/M2) COMPLY WITH THE REQUIREMENTS OF ASTM A153, CLASS B.
8. EPOXY GROUT SHALL BE NON-SHRINK HIGH CREEP RESISTANT, AND SHALL HAVE THE FOLLOWING MINIMUM ALLOWABLE PROPERTIES:
   TENSILE STRENGTH, ASTM C 30: 1,500 PSI
   FLEXURAL STRENGTH, ASTM C 580: 4,000 PSI
   COMPRESSIVE STRENGTH, ASTM C 579: 1,600 PSI/7 DAYS.
9. MINIMUM LAP SPLICES FOR REINFORCED CMU AS FOLLOWS:

BAR SIZE				
#4	#5	#6	#7	#8
24"	30"	36"	42"	48"

   - A. LAP SPLICES SHALL OCCUR DIRECTLY ABOVE FOOTINGS AND SLABS. NO SPLICES ARE ALLOWED AT MID-HEIGHT OF WALL.
   - B. LAP SPLICES THAT OCCUR AT CANTILEVERED WALLS SUCH AS: PARAPETS, RETAINING WALLS, ETC. SHALL HAVE LAP SPLICE LENGTHS INCREASED BY 50% TO 72 BAR DIAMETERS.
10. MASONRY LINTELS:
   - A. A PRECAST CONCRETE LINTEL BY CASTCRETE SHALL BE PROVIDED OVER ALL MASONRY WALL OPENINGS. THE LINTEL SHALL BE FULLY GROUTED.
   - B. LINTELS TO HAVE 4" MINIMUM BEARING AT EACH END.
   - C. SHORE PRECAST LINTEL PER MANUFACTURER'S INSTRUCTIONS.

STEEL

1. ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST AISC CODE. STRUCTURAL STEEL SHALL CONFORM TO:
   - A. ASTM SPECIFICATION A 992 GRADE 50 FOR ALL WIDE FLANGE BEAMS.
   - B. ASTM SPECIFICATION A 36 FOR MISCELLANEOUS STEEL SHAPES (ANGLES, PLATES, ETC.).
   - C. SQUARE OR RECTANGULAR HSS SHALL CONFORM TO ASTM SPECIFICATION A 500 GRADE B (FY=46 KSI).
   - D. ROUND HSS SHALL CONFORM TO ASTM SPECIFICATION A500, GRADE B (FY=42 KSI). ROUND HSS WITH A WALL THICKNESS GREATER THAN 5/8", SHALL CONFORM TO ASTM A53, GRADE B (FY=35 KSI).
   - E. ALL STEEL TO HAVE A SHOP COAT OF RUST INHIBITIVE PAINT.
   - F. DELETE PAINT ON ALL STEEL TO RECEIVE SPRAYED ON FIREPROOFING OR CONCRETE ENCASEMENT.
   - G. ALL MILL CAMBER TO BE ORIENTED UPWARD DURING FABRICATION AND ERECTION.
2. ALL SHOP AND FIELD WELDING SHALL BE PERFORMED BY WELDERS QUALIFIED, AS DESCRIBED IN "AMERICAN WELDING SOCIETY'S STANDARD QUALIFICATION PROCEDURE" (AWS D1.1), TO PERFORM THE TYPE OF WORK REQUIRED.
3. ALL CONNECTIONS SHALL BE BOLTED WITH 3/4" DIAMETER, A-325 HIGH STRENGTH BOLTS OR WELDED (UNLESS SHOWN OTHERWISE ON THE DRAWINGS).
   - A. FULL DEPTH DOUBLE CLIP ANGLE CONNECTIONS ARE TO BE USED ON ALL GIRDER AND BEAM CONNECTIONS TO COLUMNS. BOLTS TO BE AT 3-INCH O/C VERTICAL.
4. ALL ALUMINUM AND STEEL MEMBERS TO BE TREATED OR PROPERLY SEPARATED TO PREVENT GALVANIC AND CORROSIVE EFFECTS.
5. ALL STEEL WELDING RODS SHALL BE E70XX ELECTRODES.
6. SUBMIT ALL STEEL SHOP DRAWINGS FOR APPROVAL PRIOR TO ANY FABRICATION.
7. EQUIPMENT SUPPORTS:

   PROVIDE ALL SUPPORTING STEEL NOT INDICATED ON PLAN AS REQUIRED FOR THE INSTALLATION OF MECHANICAL EQUIPMENT AND MATERIALS, INCLUDING ANGLES, CHANNELS, BEAMS, HANGERS, ETC. DO NOT SUPPORT EQUIPMENT OR PIPING FROM METAL DECKING.
8. DECK SUPPORTS:

   PROVIDE 1/4" BENT PLATES AT ALL HIPS, VALLEYS, SKEWED BEAMS AND OTHER AREAS FOR DECK SUPPORT.

WOOD

1. ALL STRUCTURAL WOOD MEMBERS ARE DESIGNED AS "DRY-USE". MOISTURE CONTENT MUST BE 19% OR LESS. STORE WOOD FRAMING ABOVE GROUND AND UNDER TARPS WITH PROPER AIR CIRCULATION.
2. ALL LUMBER SHALL BE SOUTHERN PINE SPECIES #2 GRADE OR APPROVED EQUAL. ALLOWABLE DESIGN STRESSES SHALL FOLLOW NATIONAL DESIGN SPECIFICATION (NDS) (LATEST EDITION).
3. HEADERS AT NON BEARING CONDITIONS SHALL BE AS FOLLOWS:

OPENING SIZE	HEADER
UP TO 4' -0"	(2) 2" X 6"
4'- 0" TO 6'- 0"	(2) 2" X 8"
6'- 0" TO 9'- 0"	(2) 2" X 10"

4. PROVIDE SP ACQ PRESSURE TREATED LUMBER IN ACCORDANCE WITH AWPA STANDARDS TO A MINIMUM 0.40 PCF RETENTION WHERE LUMBER IS IN CONTACT WITH CONCRETE/MASONRY OR OUTSIDE OF BUILDING. ALL METAL CONNECTORS IN CONTACT WITH PRESSURE TREADED LUMBER SHALL BE GALVANIZED WITH A RATING OF G-185 AND CONFORM TO ASTM A653. ALL NAILS AND SCREWS USED WITH PRESSURE TREATED LUMBER ARE TO BE HOT-DIPPED GALVANIZED AND TO CONFORM TO ASTM A153 CLASS D. ELECTROGALVANIZED FASTENERS SHALL HAVE A CLASS RATING PER ASTM B695 NO LESS THAN 55. ALUMINUM NOT TO BE USED IN DIRECT CONTACT WITH ACQ TREATED LUMBER.
5. PLYWOOD SHEATHING:
   - A. ROOF: Use 19/32" 40/20 RATED, STRUCTURAL 1, EXP. 1, PLYWOOD SHEATHING.
   - B. SEE FRAMING PLANS FOR NAILING AND/OR BLOCKING REQUIREMENTS. USE 8'- 0" LONG X 4'-0" WIDE SHEETS WITH LENGTH ACROSS FRAMING. STAGGER PANEL END JOINTS 4'-0" TYP., ALLOW 1/8" SPACE ALONG PANEL EDGES AND END JOINTS.
   - C. SEE FRAMING PLANS FOR DIAPHRAGM NAILING TYPE, SIZE, SPACING AND LOCATIONS.
6. WOOD CONNECTIONS - ALL NAILS USED FOR STRUCTURAL FRAMING MEMBERS SHALL BE COMMON WIRE, U.N.O. ALL NAILS, TRUSS HANGERS, TRUSS ANCHORS AND STRAPS SHALL BE GALVANIZED FOR CORROSIVE RESISTANCE. ALL METAL STRAPS MUST BE INSTALLED WITH EQUAL LENGTHS ABOUT THE JOINT LINE. USE SIMPSON STRONG-TIE CONNECTOR PRODUCTS OR APPROVED EQUAL. TOE NAILING WILL NOT BE PERMITTED.

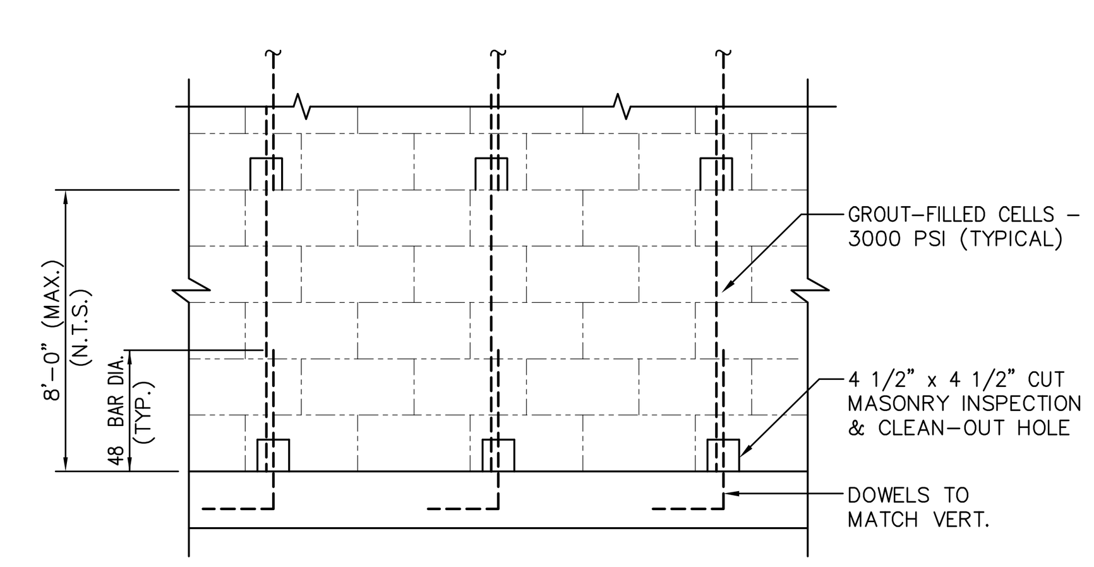
WOOD TRUSSES SYSTEM

1. WOOD
   - A. ROOF TRUSSES

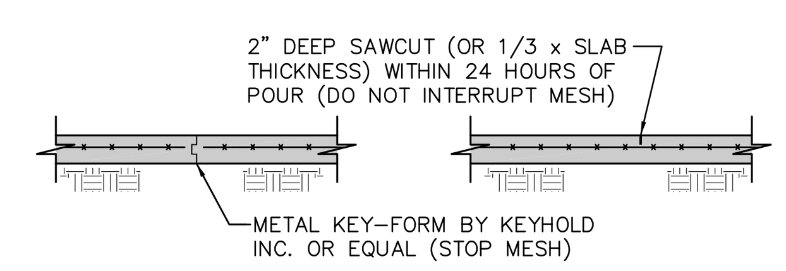
   SHALL BE DESIGNED FOR THE WOOD FABRICATOR BY A PROFESSIONAL DELEGATED ENGINEER REGISTERED IN THE STATE OF FLORIDA. SEALED CALCULATIONS AND LAYOUT DRAWINGS DESIGNED IN ACCORDANCE 61G15.31.003 FLORIDA ADMINISTRATIVE CODE, FOR WOOD TRUSS SYSTEM ARE TO BE SUBMITTED FOR APPROVAL. TRUSS SYSTEM FABRICATOR TO PROVIDE ALL TRUSS-TO-TRUSS HANGERS AS REQUIRED TO RESIST GRAVITY AND UPLIFT REACTION. (UPLIFT LOADING SHALL USE COMPONENTS & CLADDING WIND FORCES.)
2. WOOD TRUSSES SHALL BE BRACED AND ERECTED IN ACCORDANCE WITH THE 2006 EDITION OF THE BUILDING COMPONENT SAFETY INFORMATION GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES, JOINTLY PRODUCED BY WTCA AND TRUSS PLATE INSTITUTE. BRACING IN THE PLANE OF THE WEB MEMBERS:
   - A. THE TRUSS FABRICATOR SHALL PROVIDE AND LOCATE CONTINUOUS LATERAL BRACING FOR EACH TRUSS WEB MEMBER AS REQUIRED.
   - B. LATERAL BRACING SHALL BE RESTRAINED BY DIAGONAL BRACING (MIN. 2" THICK NOMINAL LUMBER). THIS BRACING IS TO BE CONTINUOUS.
   - C. A MINIMUM OF TWO ROWS OF DIAGONAL BRACING IS REQUIRED, ONE AT EACH VERTICAL WEB MEMBER CLOSEST TO BEARING LOCATIONS.
3. THE BOTTOM CHORDS SHALL BE BRACED BY CONTINUOUS LATERAL BRACING SPACED AS SPECIFIED BY TRUSS SPECIALTY ENGINEER WITH AN 8'-0" MAXIMUM (2X4 MIN)ON CENTER WITH A CEILING ATTACHED TO BOTTOM OF TRUSSES. IF NO CEILING IS ATTACHED TO BOTTOM OF TRUSSES, BRACING SHALL BE MINIMUM 2X4 @ 36" ON CENTER NAILED TO THE TOP OF THE BOTTOM CHORD. DIAGONALS PLACED AT 45 DEGREES TO THE LATERAL BRACES SHALL BE LOCATED AT EACH END. IF BUILDING EXCEEDS 60 FEET IN LENGTH, DIAGONAL BRACING SHOULD BE REPEATED AT 20 FOOT INTERVALS. SECURE CONTINUOUS AND DIAGONAL BRACING WITH A MINIMUM OF (2) 10D X 3" NAILS FOR 2X4'S AND (3) 10DX 3" FOR 2X6'S.
4. TOP CHORD BRACING:
   - A. IF PLYWOOD DECKING IS APPLIED DIRECTLY TO TOP CHORD, PROPERLY LAPPED AND NAILED TO DEVELOP DIAPHRAGM ACTION, BRACING IS NOT REQUIRED.
   - B. IF PURLINS ARE USED, DIAGONAL TOP CHORD BRACING IS REQUIRED AT EACH END. IF BUILDING EXCEEDS 60 FEET IN LENGTH, DIAGONAL BRACING SHOULD BE REPEATED AT 20-FOOT INTERVALS.
5. DO NOT CUT, DRILL OR NOTCH ROOF OR FLOOR TRUSSES WITHOUT WRITTEN APPROVAL FROM TRUSS ENGINEER. COORDINATE MECHANICAL, ELECTRICAL, PLUMBING, ETC. SIZES AND LOCATIONS WITH TRUSS LAYOUT PRIOR TO ERECTION.
6. TRUSSES SHALL BE MANUFACTURED & DESIGNED IN ACCORDANCE WITH NATIONAL DESIGN SPECIFICATION(S) FOR WOOD CONSTRUCTION, AF & PA, AND NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION, ANSI/TPI 1-1995, AND THE LOCAL CODE JURISDICTIONS.
7. DO NOT OVERLOAD FLOOR OR ROOF TRUSSES WITH BUILDING MATERIALS.
8. CONNECTOR PLATES SHALL BE MANUFACTURED BY A WTCA MEMBER PLATE SUPPLIER AND SHALL MEET OR EXCEED ASTM A653/A653M REQUIREMENTS FOR STRUCTURAL STEEL.
9. WOOD TRUSS MANUFACTURER TO DESIGN BOTTOM CHORDS OF WOOD ROOF TRUSSES FOR A MINIMUM 10 PSF LIVE LOAD. BOTTOM CHORDS OF WOOD ATTIC TRUSSES TO BE DESIGNED FOR 30 PSF MINIMUM LIVE LOAD.
10. WOOD TRUSSES MANUFACTURER TO DESIGN BOTTOM CHORD OF WOOD TRUSSES FOR 20 PSF DEAD LOAD.
11. IN ADDITION TO THE LOADS SHOWN IN THE DESIGN LOAD SCHEDULE, THE WOOD TRUSS MANUFACTURER SHALL DESIGN FOR THE WEIGHT OF ALL MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT/FIXTURES AS WELL AS CHANDELIER FIXTURES, BAR CABINETS AND ART WORK/MOBILES.

SHOP DRAWINGS

1. THE SHOP DRAWINGS SHALL BE SUBMITTED IN COMPLETE PACKAGES, WITH THE GENERAL CONTRACTOR'S REVIEW STAMP FOR THE FOLLOWING:
   - A. CONCRETE MIX DESIGNS
   - B. CONCRETE REINFORCING STEEL AND WELDED WIRE FABRIC
   - C. CONCRETE MASONRY UNIT SUBMITTALS AND OTHER MASONRY ACCESSORIES
   - D. PRE-ENGINEERED WOOD TRUSSES
   - E. HEAVY TIMBER WOOD FRAMING
2. PRE-ENGINEERED ITEMS SHALL BE SUBMITTED SIGNED AND SEALED BY A SPECIALTY ENGINEER REGISTERED IN THE STATE OF FLORIDA.

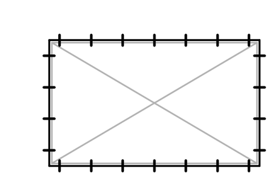


TYPICAL MASONRY FILLED CELL DETAIL
N.T.S.



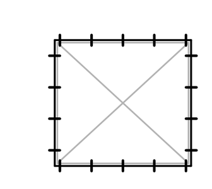
TYPICAL SLAB-ON-GRADE
N.T.S.

NOTE: CONTROL JOINTS/CONSTRUCTION JOINTS SHALL CREATE PANELS OF 150 SQ. FEET (MAXIMUM)



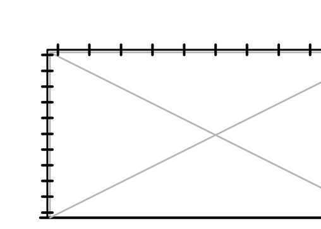
(WINDOW & DOOR OPENINGS 7'-0" WIDE AND LARGER)

2" X P.T. BUCK W/ 1/4"ø TAPCON W/ 1 1/2" EMBEDMENT AT 8"o.c., START 3" FROM CORNERS.



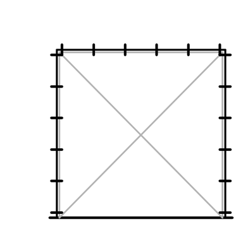
(WINDOW & DOOR OPENINGS 6'-6" WIDE AND SMALLER)

2" X P.T. BUCK W/ 1/4"ø TAPCON W/ 1 1/2" EMBEDMENT AT 8"o.c., START 3" FROM CORNERS.



(16'-0" GARAGE DOOR OPENING)

2" X P.T. BUCK W/ 1/4"ø TAPCON W/ 1 1/2" EMBEDMENT AT 8"o.c., START 3" FROM CORNERS.



(8'-0" GARAGE DOOR OPENING)

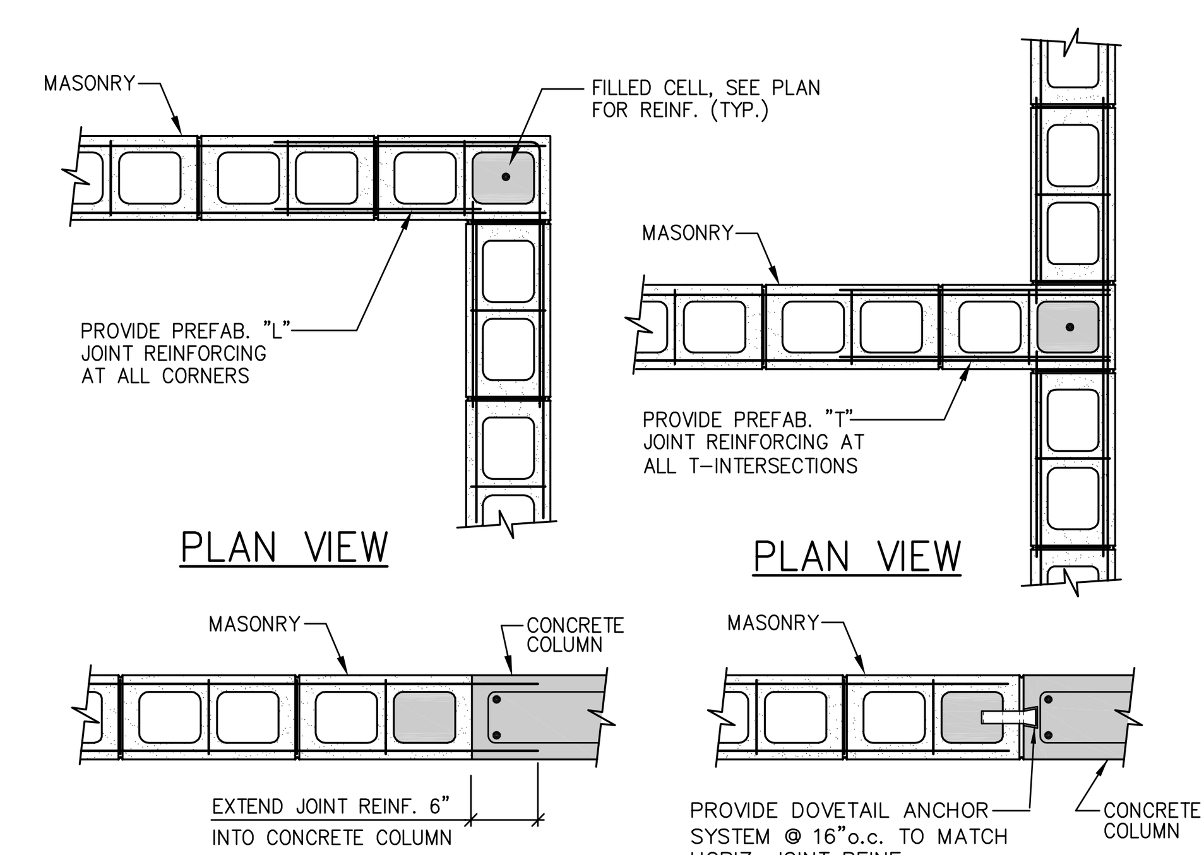
2" X P.T. BUCK W/ 1/4"ø TAPCON W/ 1 1/2" EMBEDMENT AT 8"o.c., START 3" FROM CORNERS.

BUCKS TO BE FASTENED HORIZONTALLY AND VERTICALLY TO CONCRETE BEAMS AND COLUMNS OR CONCRETE FILLED MASONRY.

G.C. TO COORDINATE OPENING DIMENSIONS.

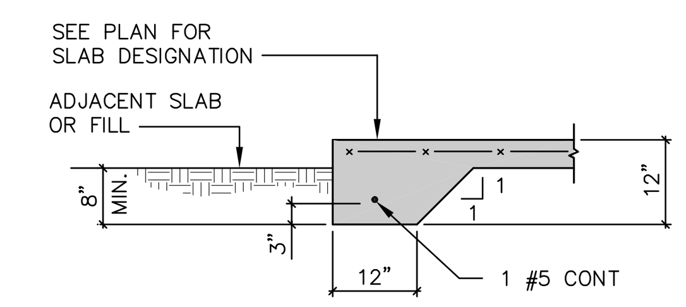
TYPICAL WOOD BUCK TO CONCRETE CONNECTION DETAIL

1. EXTERIOR GLAZED OPENINGS IN BUILDINGS SHALL COMPLY WITH 2010 FLORIDA BUILDING CODE BY EITHER BEING DESIGNED FOR IMPACT RESISTANCE OR BEING PROTECTED BY IMPACT PROTECTIVE SYSTEMS.



TYPICAL MASONRY DETAILS
N.T.S.

Structural Drawing Updated
Based on Architectural Backgrounds Dated 6-13-16



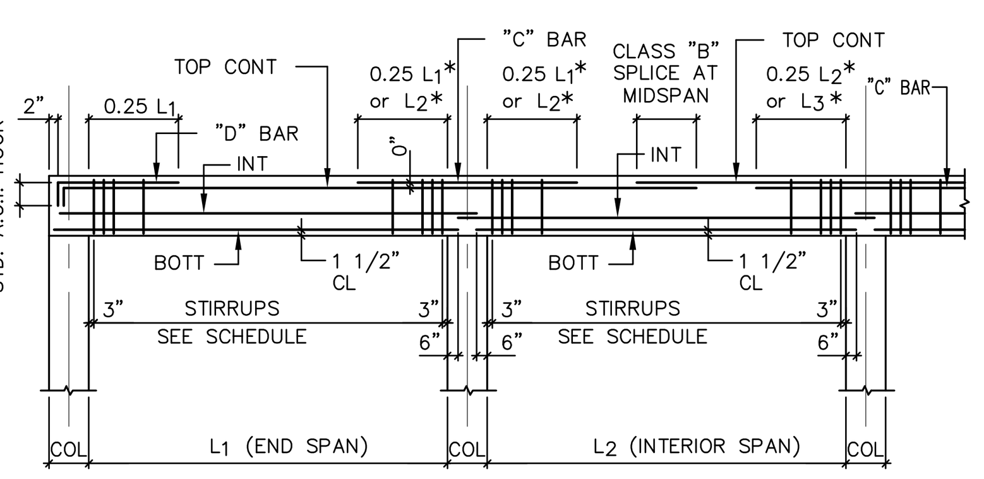
THICKENED EDGE (T.E.)
N.T.S.

DESIGN LOAD SCHEDULE
(ALL LOADS SHOWN ARE IN POUNDS PER SQ. FT.)

COMPONENT \ AREA	ROOF								
SYSTEM	5								
MEP	5								
MISC	10								
TOTAL DEAD LOAD	20								
TOTAL LIVE LOAD	30								
TOTAL LOAD	50								

CONCRETE COVER SCHEDULE

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:	3"
CONCRETE EXPOSED TO EARTH OR WEATHER:	
#6 OR LARGER	2"
#5 OR SMALLER	1 1/2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:	
SLABS, WALLS, JOISTS (#11 AND SMALLER)	3/4"
BEAMS, COLUMNS (PRIMARY REINF., TIES, STIRRUPS, SPIRALS)	1 1/2"
CONCRETE FOR COASTAL EXPOSURES EXPOSED TO WEATHER:	
WALL & SLABS	2"
OTHER MEMBERS	2 1/2"



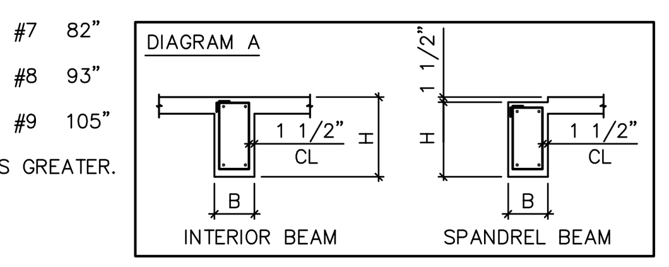
"C" BAR : TOP BAR AT INTERIOR SUPPORT (IN ADDITION TO TOP CONT BARS) PLACE IN SAME LAYER AS TOP CONT BARS (U.O.N.). LOCATE AT RIGHT SUPPORT OF SPAN INDICATED IN SCHEDULE.

"D" BAR : TOP BAR AT EXTERIOR SUPPORT (IN ADDITION TO TOP CONT BARS) PLACE IN SAME LAYER AS TOP CONT BARS (U.O.N.).

"INT" BARS : INTERMEDIATE BARS LOCATED AT A SPACING EQUAL TO THE WIDTH OF THE BEAM BUT NOT GREATER THAN 12" ABOVE BOTT BARS. IF MORE THAN ONE PAIR, PLACE IN LAYERS OF TWO.

CLASS "B" TENSION SPLICE (3000 PSI)				
	#4	38"	#7	82"
	#5	47"	#8	93"
	#6	56"	#9	105"

* WHICHEVER IS GREATER.



NOTES :

WHEN ADJACENT BEAMS OR TIE BEAMS HAVE TOP CONT BARS OF DIFFERENT SIZE, THE TRANSITION SHOULD BE MADE AT MIDSPAN OF THE BEAM WITH SMALLER SCHEDULED BARS. USE LAP SPLICE LENGTH OF SMALLER SIZE BAR.

(2L) - INDICATES BARS PLACE IN TWO LAYERS. WHERE BARS ARE PLACED IN TWO LAYERS, THE SECOND LAYER BARS MUST BE PLACED DIRECTLY UNDER BARS IN THE FIRST LAYER (IF TOP BAR) OR DIRECTLY OVER BAR IN THE FIRST LAYER (IF BOTT BAR). PROVIDE 1" CLEAR DISTANCE BETWEEN LAYERS OR ONE BAR DIAMETER, WHICHEVER IS THE GREATER DISTANCE.

SCHEDULED BEAM SIZES : [SEE DIAGRAM A]

"B" INDICATES BEAM WIDTH DIMENSION. WHEN BEAM IS OVER A BLOCK WALL, USE ACTUAL BLOCK WIDTH (7 5/8" or 11 5/8").
"H" INDICATES BEAM DEPTH DIMENSION. LESS 1 1/2" FOR RECESS FOR BLOCK WALL DEDUCTED WHERE APPLICABLE, OR MINIMUM DEPTH IN A VARIABLE DEPTH BEAM. COORDINATE BEAM CONFIGURATION WITH ARCHITECTURAL DRAWINGS.

TYPICAL BEAM BAR PLACEMENT DIAGRAM
N.T.S.

NOT FOR CONSTRUCTION

DESIGN DEVELOPMENT
6/30/16

THESE ARE PROGRESS DRAWINGS, THEREFORE THEY ARE ISSUED PRIOR TO COMPLETION OF THE STRUCTURAL DESIGN, AND OTHER DESIGN DISCIPLINES. INCLUDING BUT NOT LIMITED TO ARCHITECTURAL OR MECHANICAL DESIGNS; AND AS SUCH, ARE INCOMPLETE BY NATURE FOR THE COMPREHENSIVE SCOPE OF THE PROJECT. ALLOWANCES FOR STRUCTURAL ELEMENTS REQUIRED DUE TO THE COMPLETION AND CROSS-COORDINATION OF ALL OTHER DISCIPLINES SHOULD BE MADE.

PHILIP J. RIZZO
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• INTERIORS
• PLANNERS
INCORPORATED

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REVISIONS	NO.
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DATE 06-30-16

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REG No. 15048

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